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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,764	07/14/2006	Shihe Li	14556.0004USWO	2984

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER	
OBAYANJU, OMONIYI	
ART UNIT	PAPER NUMBER
4163	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,764	LI ET AL.	
	Examiner	Art Unit	
	OMONIYI A. OBAYANJU	4163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/14/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim1 is objected to because of the following informalities: There are insufficient antecedent basis for several limitations in claim 1. Such as "the initial cell searching", "the user terminal", the DwPTS position, etc. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al (US Publication No. 20030031238) in view of Demir et al (US Patent No. 7308258).

4. As to claim 1, Li teaches a method for initial cell searching which includes Step C: determining the DwPTS position of each received subframe by using the time window decision method (fig. 1, #1); Step D: performing the succeeding procedure of the initial cell searching and returning (fig. 4) to execute Step A (fig. 3, #6) subsequently when the DwPTS positions of the most received subframes can be determined, and executing Step E when the DwPTS positions of the most received subframes can not be determined (pg. 4, pp0056, lines 8-13).

5. Li fails to teach the gain control method of controlling the user terminal. However Demir teaches a gain control method (col. 8, lines 30-35) for the initial cell searching

(abs) in TD-SCDMA mobile communication system (col. 10, lines 40-45), said gain control method comprising: Step A the user terminal receiving data in the maximum receiving gain (col. 7. lines 25-30 and lines 50-55) at the selected carrier frequency; Step B: recording the received data of a plurality of subframes (col. 5, lines 25-30) and Step E: judging whether the receiver is in saturation (col. 9, lines 55-60) wherein, returning to execute Step A (fig. 5, #434) subsequently when the receiver is not in saturation, and decreasing the receiving gain by a step length (fig. 5) and returning to execute Step B subsequently when the receiver is in saturation (col. 9, lines 55-65). Thus, it would have been obvious to one of ordinary skill in the art at time the invention was made to combine the DwPTS position teachings of Li with the gain control method of Demir to achieve an accurate and a precise downlink synchronization between a base station and a wireless communication device when the device is powered on.

6. As to claims 3-5, Li teaches wherein in Step D, judging whether the DwPTS positions whose number exceeds half of the total number of DwPTS positions (pg. 4, pp 0059) in the received subframes (frame with a length time 5ms) are determined so as to determine that the DwPTS positions of the most received subframes can be determined; and in Step D, judging whether the DwPTS positions whose number exceeds half of the total number of DwPTS positions in the received subframes are not determined so as to determine that the DwPTS positions of the most received subframes can not be determined (pg. 4, pp0066).

7. As to claims 2 and 6, Li teaches the limitations of claim 1 as discussed above, but Li fails to teach the re-selection of another carrier frequency and not finding a base

station. However, Demir teaches wherein after said method returning to execute Step A subsequently in Step D and Step E, Step A re-selects another carrier frequency from all possible carrier frequencies (col. 2, lines 45-55) until each possible carrier frequency is selected and then ends the initial cell searching (fig. 6, #530). Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to combine the teachings of Li with the Automatic Gain Control method of Demir to efficiently synchronize or achieve a good communication link between a cell site and a mobile device upon activation of the device.

8. As to claim 7, Li and Demir teaches the limitations of claim 1 as discussed above, but they fail to teach the decreasing range of the receiving gain. However, it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). Applicant has disclosed no evidence of the criticality of the claimed ranges of the receiving gain. One of ordinary skill in the art would have been motivated to adjust the range of the receiving gain to avoid degradation in detection performance due to saturation. Note also that Demir teaches adjusting the ranges of gain settings (col.9, lines 55-60).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI A. OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on 571-272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. A. O./
Examiner, Art Unit 4163

/Mark A. Robinson/
Supervisory Patent Examiner, Art Unit 4163